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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10 067,818	02/08/2002	Jim-Woo Park	1514.1007	9551

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EXAMINER

COLON, GERMAN

ART UNIT PAPER NUMBER

2879

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,818

Applicant(s)

PARK ET AL *16*

Examiner

German Colón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 19, 20, 22, 23 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 21 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Response to Amendment

- 1 The Amendment, filed on February 26, 2003, has been entered and acknowledged by the Examiner.
- 2 Addition of claims 21-28 has been entered.

Claim Rejections - 35 USC § 103

- 3 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 4 Claims 1-5, 19, 20, 22, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaya et al. (US 6,172,458) in view of McKenna et al. (US 5,059,148).

Regarding claim 1, Nakaya discloses an organic EL device comprising: a substrate **21**, an organic EL element formed on said substrate, wherein said organic EL element comprises a lower electrode **22**, an organic EL layer **24** and an upper electrode **25** that are sequentially stacked on said substrate. Nakaya teaches to provide a flat panel which encapsulates said organic element to said substrate (see Col. 8, lines 10-18) to prevent oxidation of the organic and electrode layers, but is silent regarding the structure of said flat panel.

However, in the same field of endeavor, McKenna discloses an EL display device comprising a substrate **30** and a flat panel **22** attached to the substrate, said flat panel comprising a through hole and a through hole shutting cap **26** which shuts said through hole (see Fig. 3) with

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the purpose of protecting said EL display device from moisture, preventing or controlling occurrence of dark spot of the organic element, and increasing the display life, by providing a protective substance through the through hole (see Col. 1, lines 62-66 and Col. 2, lines 14-21). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a flat panel as disclosed by McKenna to the organic EL device of Nakaya in order to protect said EL display device from moisture, preventing or controlling occurrence of dark spot of the organic element, increasing the display life, by providing a protective substance through the through hole.

Regarding claim 2, Nakaya-McKenna discloses the through hole shutting cap comprising a curable agent (see Col. 3, line 20 of '148).

Regarding claim 3, Nakaya-McKenna discloses the through hole shutting cap comprising a welding material (see Col. 3, lines 21-22 of '148).

Referring to claim 4, Nakaya-McKenna discloses the welding material including Pb (see Col. 3, line 22 of '148).

Referring to claim 5, Nakaya-McKenna discloses a through hole and a through hole shutting cap. The recitation "the through hole being a passage which controls a pressure" has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. The Examiner notes that if said recitation is claimed as a functional limitation of the device, it should be recited as a means plus function limitation.

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Further, the organic EL device of Nakaya-McKenna will inherently control a pressure inside a space formed between the flat panel and the substrate, once the through hole is shut.

Referring to claim 19, Nakaya-McKenna discloses an adhesive which attaches said flat panel to said substrate (see Col. 3, lines 54-55 of '148).

Regarding claim 20, claim 20 is rejected over the reasons stated in the rejection of claim 5.

Regarding claim 22, Nakaya-McKenna discloses the claimed invention except for the limitation of "at least one through hole formed in said substrate". Nakaya-McKenna discloses the through hole formed in the flat panel. However, it has been held that rearranging of parts of an invention involves only routine skills in the art. Thus, it would have been obvious to one having ordinary skills in the art the time the invention was made to provide the at least one through hole in the substrate, since rearrangement of parts of an invention is considered within the skills of the art.

Regarding claim 23, claim 23 is rejected over the reasons stated in the rejection of claim 5.

Referring to claim 25, Nakaya-McKenna discloses an adhesive which attaches said flat panel to said substrate (see Col. 3, lines 54-55 of '148).

5. Claims 6-9 and 26-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaya-McKenna as applied to claim 1 above, and further in view of Taniguchi et al. (US 5,239,228).

Referring to claim 6, Nakaya-McKenna discloses the claimed invention except for the limitation of "further comprising a moisture/water absorbing agent arranged at a location not shielding light emitted from the organic EL element". However, in the same field of endeavor, Taniguchi discloses an EL device comprising a flat panel having a groove at a location not shielding light emitted from the organic EL element, said groove including a moisture-absorbing agent with the purpose of improving the moisture-resistance property of the EL device (see Col. 7, lines 38-40), which prevents or controls occurrence of dark spot of the organic element and increases the display life. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Taniguchi of providing a moisture-absorbing agent in order to improve the moisture-resistance property of the EL device, which prevents or controls occurrence of dark spot of the organic element and increases the display life.

Regarding claim 7, Nakaya-McKenna-Taniguchi discloses the flat panel including a moisture absorbing agent reception groove (see Col. 7, lines 38-40 and Fig. 10 of '228).

Regarding to claim 8, Nakaya-McKenna-Taniguchi discloses the claimed invention except for the limitation of "the location being a periphery region of said substrate". However, it has been held that rearranging of parts of an invention involves only routine skills in the art. Thus, it would have been obvious to one having ordinary skills in the art the time the invention was made to provide a moisture absorbing agent reception groove in the substrate, since rearrangement of parts of an invention is considered within the skills of the art.

Referring to claim 9, Nakaya-McKenna-Taniguchi discloses the location being a periphery region of said flat panel (see Col. 7, lines 38-40 and Fig. 10 of '228).

Referring to claims 26-28, claims 26, 27 and 28 are rejected over the reasons stated in the rejection of claims 6, 7 and 9, respectively

Allowable Subject Matter

6. Claims 21 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

The Examiner notes that the Prior Art of Record discloses an organic EL device comprising: a substrate, an organic EL element formed on said substrate, wherein said organic EL element comprises a lower electrode, an organic EL layer and an upper electrode that are sequentially stacked on said substrate; a flat panel which encapsulates said organic EL element, a through hole on said flat panel and a through hole shutting cap.

Regarding claim 21, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in claim 21, and specifically comprising the limitation of "comprising a first through hole formed in the flat panel and a second through hole formed in the substrate". It is the Examiner's position that the organic EL device of Nakaya-McKenna could not be modified to comprise a first through hole in a flat panel and a second through hole in a substrate, due to the protective substance that fills the space between said flat panel and said substrate.

Referring to claim 24, claims 24 is allowable for the reasons given in claim 21.

Response to Arguments

8. Applicant's arguments with respect to claims 1-9 and 19-20 have been considered but are moot in view of the new ground(s) of rejection.

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Schrank, in US 4,839,557, discloses an EL panel with a through hole and a sealing method for said panel and said through hole

Tanaka et al., in US 3,926,502, discloses a display device with a through hole having a metal through hole shutting cap.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 703-305-5987. The examiner can normally be reached on Monday thru Friday, from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 703-305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


gc

May 16, 2003



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